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CROCEUM EMERY, WITH REMARKS

BY

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## A DESCRIPTION OF THE MALE OF *PROCERATIUM* *CROCEUM* EMERY, WITH REMARKS.

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Although the genus *Proceratium* was erected by Roger in 1863, the few species in this genus are known only from the worker and female phases. This has been due probably to the following reasons: either that myrmecologists have neglected to describe the males which they have collected, or they have not been fortunate enough to find the males associated with the females or workers, or they have failed to collect the males at all.

Three species with several subspecies and varieties have been recorded for North America. The most common of these in Mississippi, at least, is the species *P. croceum*, the colonies of which I have usually found in rotting stumps and logs. Although this is not a rare ant in Mississippi, it is by no means a common species. The colonies of *P. croceum* are very small. In one of the largest colonies that I have found there was a dealate queen and 30 workers. In a smaller colony I found 1 dealate female and 11 workers. It is not unusual to find a single dealate queen alone.

During the summer of 1929 I was fortunate enough to find a colony of *P. croceum* which in addition to workers contained both alate males and females. From some of these specimens I have drawn the description given below. Since this is the first male to be described for the genus I have thought it advisable to present figures also.

I am indebted to Dr. W. M. Wheeler for his opinion concerning the taxonomical status of the ants, and to Mrs. G. G. DeBord for the accompanying illustrations.

### *Proceratium croceum* (Roger).

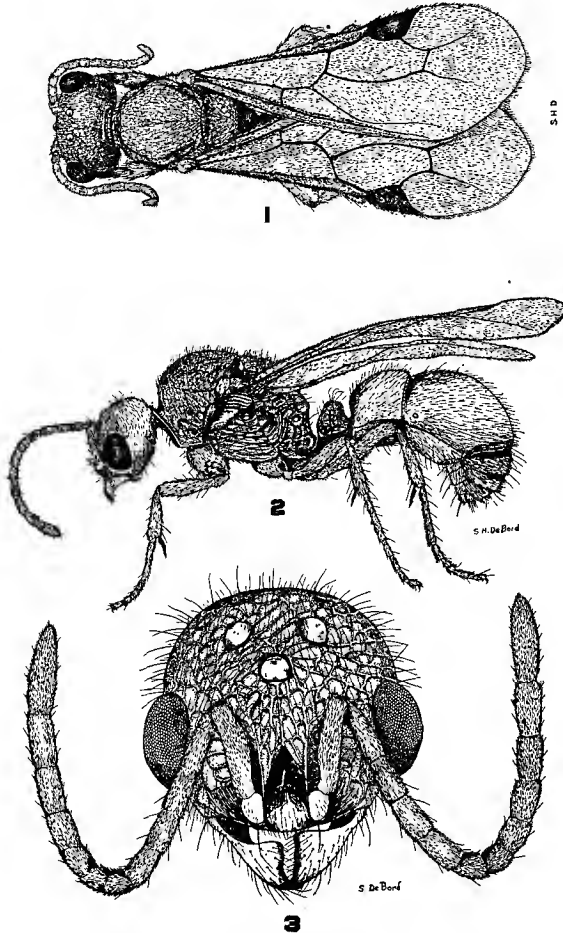
- P. croceum* (Roger), Berl. Ent. Zeitschr., Vol. 4, p. 288 (1860), female (*Ponera crocea*).  
*Sysphingia? crocea*, Mayr, Sitzungsber. Akad. Wiss. Wien, Vol. 53, p. 501 (1866), female.  
*P. croceum* Mayr, Verh. Zool. Bot. Ges. Wien, Vol. 36, p. 437 (1886); Emery, Zool. Jahrb. Syst. Vol. 8, p. 264, Pl. 8, f. 5, 6 (1895), worker and female.

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\* A contribution from the Mississippi Agricultural Experiment Station.

*Male.* Length: 3.75-4.25 mm.

Head, excluding the mandibles, slightly broader than long when measured from side to side through the center of the eyes, posterior border and posterior angles strongly rounded. Vertex with 3 fairly prominent ocelli, the distance between one of the lateral and the median



Male of *Proceratium croceum* (Roger)

Fig. 1, Dorsal view of body. Fig. 2, Lateral view of body.  
Fig. 3, Anterior view of head. (All greatly enlarged.)

ocellus less than that between the two lateral ocelli. Eyes large and prominent, oblong-oval, strongly convex. Antennæ 13-segmented, sub-filiform; scape short, moderately stout, not attaining the anterior border of the median ocellus; last funicular segment slightly longer than the two preceding segments taken together. Frontal carinæ

short, subparallel, not concealing the pedicels of the scapes. Region of the frontal area deeply impressed. Anterior border of the clypeus broadly, but gently emarginate medianly. Mandibles well developed, subtriangular, the apical margins of each edentate and strongly sinuate, terminating in a sharp apical point. Thorax short and massive. Pronotum well developed, easily discernible dorsally, with rather distinct humeral angles. Mesonotum without Mayrian furrows but with fairly distinct parapsidal sutures posteriorly, the anterior median portion of mesonotum subtruncate, and fitting into the deep, central emargination of the posterior border of the prothorax. Wings sordid brownish; pilose throughout, and with ciliated margins; the anterior pair, each with a very large and distinct stigma, and an open radial cell, a closed cubital cell, but no discoidal cell. Scutellum with a distinct median carina posteriorly. Metanotum terminating centrally in a large, pointed tooth or tubercle. Base of epinotum distinctly shorter than the declivity, the two, meeting in a very definite angle; at the point of their junction there is a deep median furrow which extends throughout most of the base of the epinotum. Distal end of the tibia of each leg with a single, well defined spur. Petiole with the anterior surface decidedly declivous, on each side, the declivous surface more or less bounded by a lateral border which terminates antero-ventrally in a small, blunt tooth or tubercle; superior margin entire, rounded from side to side, and rather abruptly meeting the very short and somewhat vertical posterior surface; ventral surface with a lamellar plate, which is backwardly directed. Gaster oblong, the apex reflexed but not quite so strongly as with the worker or female; the first segment truncate at base, meeting the second segment in a very strong constriction; the second segment large, easily occupying more than one half of that portion of the dorsum which is visible from above; genitalia capable of being extruded or retracted.

Mandibles, clypeus, frontal area, scapes of antennæ, anterior surface of petiole, legs, and gaster smooth and shining; remainder of body subopaque. Head, thorax, and petiole, rugulose-reticulate; the sculpturing on the head somewhat fine, that on the thorax heavier, especially on the pleuræ of the prothorax, and on the epinotum; petiole also similarly sculptured.

Pilosity golden yellowish; suberect? moderately dense, covering all parts of the body. Pubescence of the same color as the pilosity, dense, covering all parts of the body, but less abundant and less conspicuous on the pleuræ of the thorax; in some lights the pile and pubescence give the body a burnish golden tinge.

Ferruginous; head, dorsum of thorax, petiole and gaster infuscated.

Described from three alate males, which, with a large number of alate females, and workers were collected from several cavities in a rotting pine log, 4 miles north of Aberdeen, Mississippi, on August 19, 1929.

Cotypes are in the collection of the Department of Entomology of the Mississippi A. & M. College, and my collection.